CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

Staff Report for Item 5:

Tentative Order No. R9-2002-0342

General Waste Discharge Requirements for the Disposal and/or Reuse of Petroleum Hydrocarbon Fuel Contaminated Soils (FCS) in the San Diego Region

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1. INTRODUCTION

The General Waste Discharge Requirements (WDRs) in tentative Order No. R9-2002-0342 apply specifically to the disposal and/or reuse of petroleum contaminated soils. Petroleum fuel contaminated soils *("FCS wastes").* In the context of tentative Order R9-2002-0342, "FCS wastes" are defined as soils containing elevated concentrations, above natural background concentrations, of petroleum fuel constituents from the following specific fuel types: gasoline, aviation gasoline ("*av-gas*"), diesel fuel, jet fuels (Jet A, JP-4 and JP-5), kerosene, and fuel oils. The WDRs were developed using criteria previously established by the Regional Board, as well as additional practices of the Regional Board staff and other local agencies, used to evaluate FCS reuse/disposal proposals. The tentative Order establishes WDRs containing revised/updated criteria for the proper management and reuse of FCS wastes.

2. BACKGROUND

The California Water Code gives the California Regional Water Quality Control Boards authority to protect the quality of water resources within their Regions. Discharges of nonhazardous wastes (*e.g.,* FCS wastes) to land are regulated by the California Code of Regulations Title 27. This body of regulations prescribes the criteria used by the Regional Boards to classify wastes based upon its threat to water quality and a site based upon the level of protection afforded to water quality. The threat to water quality posed by a particular disposal activity depends upon a site-specific combination of waste and site characteristics. FCS wastes are typically classified as designated or inert wastes and typical disposal sites where these wastes are "reused" are unclassified waste management units.

On May 16, 1995, the California Regional Water Quality Control Board, San Diego Region (Regional Board) adopted Resolution No. 95-63: "A Resolution Conditionally Waiving Adoption of Waste Discharge Requirements for Disposal/Reuse of Petroleum Hydrocarbon Fuel Contaminated Soils (FCS)." This conditional waiver of WDRs established clear criteria for the reuse/disposal of FCS wastes at unregulated sites located within the San Diego Region. The conditions of the waiver and waste classification were based upon state requirements then included in California Code of Regulations (CCR), Title 23, Chapter 15.

On October 10, 1999, Senate Bill 390 (Alpert) amended California Water Code (WC) Section 13269. As a result, all of the Regional Board's current waivers will expire on January 1, 2003 absent Board action to renew them. In order to continue the existing conditional waivers, WC 13269 requires the Regional Board to:

a) Review the terms, conditions and effectiveness of each type of waiver included in their waiver policies;

b) Renew waiver policies and all waivers for specific discharges by January 1, 2003 (failure to renew a waiver automatically results in termination);

c) Establish waiver conditions;

d) Enforce waiver conditions; and,

e) Renew waivers every five years, or

f) Determine if general or individual waste discharge requirements should be issued for ongoing discharges where waivers have been terminated.

The recent amendment to WC 13269 affects Resolution No. 95-63 and addenda thereto, which will expire on January 1, 2003. Pursuant to the requirements of WC Section 13269, the current Waiver Policy and types of discharges (waivers) included in the Policy have been reviewed and revised as necessary. A revised waiver policy was approved as a by the Regional Board on September 11, 2002 as a Basin Plan amendment (Resolution R9-2002-0186).

Although the conditional waiver has generally worked well, there have been a few problems in administering the original version of Resolution No. 95-63. Addendum No. 1 was added to Resolution No. 95-63 after a discharge of FCS wastes resulted in complaints and concerns about a discharge of FCS wastes in a residential area meeting the criteria for a sole source aquifer. Another series of discharges, involving FCS wastes in Blossom Valley, pointed out the need for additional follow-up to verify the dischargers properly implement reuse/disposal criteria and controls as required by Resolution 95-63. The cumulative experience obtained from these incidents pointed out the need to revise the conditions applied to the reuse/disposal of FCS wastes.

The Regional Board staff concludes that discharges involving the reuse/disposal of FCS wastes, at sites other than classified waste management units, are more appropriately regulated under General Waste Discharge Requirements than Individual Waste Discharge Requirements because:

a) The reuses/disposal of FCS wastes in redevelopment projects is an effective alternative to disposing of those wastes in existing municipal solid waste landfills.

b) Projects involving disposal and/or reuse of FCS wastes commonly require the implementation of the same or similar waste characterization protocols, waste

management/containment criteria, and site-specific criteria for the protection of water quality.

c) These General WDRs would reduce RWQCB time expended on preparing and considering individual waste discharge requirements for each project.

d) These General WDRs would significantly simplify and expedite the application process for the dischargers.

General WDRs allow the Regional Board to more effectively and efficiently regulate discharges of FCS wastes for disposal and/or reuse in the San Diego Region. The collection of a filing fee will help cover the cost of administering the General WDRs. Tentative Order R9-2002-0342 will replace the current conditional waiver of WDRs in Resolution No. 95-63 and addenda thereto.

3. CLASSIFICATION OF SOLID WASTES AND DISPOSAL UNITS

Waste Classification. California Code of Regulations (CCR), Title 27 classifies wastes as hazardous, designated, nonhazardous solid waste, or inert waste. FCS wastes are rarely a hazardous waste, per the criteria listed in CCR Title 22, Division 4.5, § 66261 *et seq*, and is never a nonhazardous solid waste, normally containing putrescible wastes comprised of municipal solid waste. In the experience of the Regional Board staff, FCS wastes are commonly classified as either “designated wastes” or “inert wastes.”

A designated waste is defined as: "nonhazardous waste which consists of, or contains, pollutants that, under ambient environmental conditions at the waste management unit, could be released in concentrations exceeding applicable water quality objectives, or that could reasonably be expected to affect beneficial uses of the waters o the state as contained in the appropriate water quality control plan" [Water Code - WC Section 13173].

An inert waste, as defined, "does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste" [CCR Title, §20230(a)].

FCS wastes are commonly generated during remediation of unauthorized releases (leaks) of petroleum fuel constituents from a number of similar fuel containment systems, including: leaking underground storage tank systems, leaking fuel pipelines, and leaking above ground storage tank systems. In the absence of any other information, the Regional Board staff categorically classifies FCS wastes as “designated wastes” pursuant to WC Section 13173.

Waste Management Unit Classification. CCR Title 27 contains criteria whereby waste management units ("*WMUs*") are classified according to their ability to protect surface and ground water resources by effectively containing wastes discharged into the WMU. There are two classifications of WMUs – "Class II WMUs" for disposal of designated wastes and "Class III WMUs" for disposal of nonhazardous municipal solid wastes (MSW). Both Class II and Class III WMUs must meet prescribed state standards of siting, design (including composite liners and leachate collection systems), and construction.

In addition, CCR Title 27 also refers to *"unclassified WMUs"* [Title 27, §20240], although specific design, siting, or construction standards for these units are not specified in the regulations. Under some conditions, "inert wastes" may be suitable for discharges (*i.e.*, disposal/reuse) of into unclassified WMUs. Unclassified waste management units are those facilities receiving discharges of waste other than Class I (per CCR Title 23, Chapter 15), Class II or Class III (CCR Title 27) waste management units.

WASTE CHARACTERIZATION

Soils that contain elevated concentrations of petroleum hydrocarbons (FCS wastes) are very common in the San Diego Region. While no estimate for total volume is available, the Local Oversight Program (LOP) agencies oversee more than 2,500 leaking underground storage tank (UST) cases in the San Diego Region. Work at leaking USTs commonly produces some quantity of fuel contaminated soil as a result of repairs to UST systems, closure of UST systems or cleanup projects at leaking UST sites. To be useful as engineered fill, these FCS wastes, including treated and/or untreated wastes, need be disposed or reused in an economical way that won't create a condition of pollution or impair the beneficial uses of the waters of the state. In addition, commonly encountered waste constituents associated with petroleum fuels are likely to biodegrade with time, under the range of subsurface conditions commonly encountered in the San Diego Region. The most common types of petroleum hydrocarbons fuels present in FCS wastes include gasoline, aviation gasoline, diesel fuels, kerosene, jet fuel (Jet A, JP-4, and JP-5), and fuel oil.

Used oil or "waste oil" contaminated soils were not included in the definition of FCS wastes included in tentative Order R9-2002-0342. There are two primary reasons for this: a.) the California Health and Safety Code Section 25250.4 requires the "used oils" be managed as a "hazardous waste" and b.) by comparison with the other types of petroleum contaminants (fuel constituents), waste oil is a very heterogeneous material. Waste oils have been found to contain a variety "non-fuel" constituents/pollutants, including: chlorinated volatile organic compounds, polychlorinated biphenyls (PCBs), metals, acids, and pesticides. Some of these constituents do not degrade (metals), or degrade very slowly (PCBs), under natural subsurface conditions found in the San Diego Region.

Tentative Order R9-2002-0342 uses waste constituents in petroleum hydrocarbons fuels as target indicators of potential pollutants. Target indicators compounds were selected based upon a suite of criteria: prevalence in fuel products, environmental mobility- higher solubility in water, toxicity, and the numerical regulatory concentration limits that are, or can be used, as water quality objectives to protect beneficial uses of water resources. Tentative Order R9-2002-0342 uses indicators of volatile organic compounds (VOCs), including: benzene, toluene, ethylbenzene, xylenes (BTEXs), total petroleum hydrocarbon (or TPH), and fuel additives (*e.g.*, MTBE).

Although these are not the only potential pollutants that may be found in petroleum hydrocarbon fuels, FCS wastes containing only these constituents may be suitable for regulation under General WDRs for use of FCS wastes as engineered fill. The General Waste Discharge Requirements only applies to listed constituents and does not imply that analysis of other components such as pesticides, chlorinated solvents, and other metals may not be necessary on a site-specific basis. Where such additional pollutants are present, site-specific WDRs would be required for proposed discharges of wastes at facilities other than classified waste management units.

Tentative Monitoring and Reporting Program R9-2002-0342 requires the use of standard analytical methods and protocols promulgated by the U.S. Environmental Protection Agency in the latest edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846" or "SW846". The analytical methods and protocols included in the SW846 document are commonly required by Federal, State and local agencies for responsible parties performing corrective actions at unauthorized release sites involving hydrocarbon fuel constituents and for characterization of FCS wastes.

5. DISCHARGE SPECIFICATIONS

Tentative Order No. R9-2002-0342 establishes waste discharge requirements for the potential reuse and/or disposal of FCS wastes in areas that overlie ground water basins designated as suitable for use as municipal and domestic public water supplies. Applicable numeric and narrative water quality objectives for groundwater resources are promulgated in Chapter 3 of the Water Quality Control Plan for the San Diego Region.

Discharges (*i.e.*, for reuse/disposal) of FCS wastes may also occur in areas located in proximity to surface waters that support beneficial uses including recreation (REC1 and REC2) and support of fish and wildlife (COLD, WARM, WILD, RARE). Further, a number of impaired water bodies have been identified in the San Diego Region and listed on the statewide 303-d list. Updated conditions and controls have been added to tentative Order R9-2002-0342 to help ensure that discharges of FCS wastes implement adequate best management practices (BMPs) for storm water conveyance and control of erosion to preclude discharges of FCS wastes, or other pollutants from the site, into impaired water

bodies. Applicable numeric and narrative water quality objectives for surface water resources are promulgated in Chapter 3 of the Water Quality Control Plan for the San Diego Region.

In order to protect the designated beneficial uses of water resources, the Discharge Specifications establish the minimum criteria for FCS disposal sites shall meet, including:

a. **Groundwater Dependent Area Protection**: The disposal site shall not be located in an area that is dependent on groundwater for the sole source of drinking water. This requirement was carried over from Addendum No. 1 to Resolution No. 95-63.

b. **Industrial Reuse Restriction**: The disposal site shall only have an industrial or commercial use such as a road bed, commercial fill site or other use that limits potential human exposure. Residential properties shall not to be used as disposal sites. If a structure is to be constructed over the disposal site an approval must be obtained from the appropriate local agencies. This requirement was carried over from Addendum No. 1 to Resolution No. 95-63.

c. **Separation from Ground Water**: The FCS waste shall be placed at least five feet above the highest anticipated level of ground water. The soil that separates the FCS waste from groundwater shall have a significant clay content (greater than 5% clay-sized material) or a permeability of less than 10^{-5} cm/sec. The required separation distance from groundwater is consistent with the general siting criteria for waste management units [CCR Title 27, §20240]. This requirement is also consistent with previous siting criteria included in Resolution No. 95-63.

d. **Separation from Surface Water**: The waste shall be placed at least 100 feet from the nearest surface water. This requirement is also consistent with previous siting criteria included in Resolution No. 95-63.

e. **Flood Plan Protection**: The waste shall be protected against 100-year peak stream flows as defined by the County flood control agency. The separation distance from groundwater is consistent with the general siting criteria for waste management units [CCR Title 27, §20260]. This requirement is also consistent with previous siting criteria included in Resolution No. 95-63.

Proposed discharge sites that do not meet these minimum criteria, including approval of the property owner would not qualify for coverage under tentative Order R9-2002-0342.

The Regional Board staff would notify dischargers not meeting these minimum criteria that site-specific WDRs would be necessary for discharge of FCS wastes at their site. In addition, the discharge of FCS wastes for reuse/disposal must be covered in such a way that would be consistent with materials meeting the following minimum specifications:

f. **Cover**: The waste shall be covered by either 1) engineered materials (*e.g.* used as road base, fill beneath buildings, bridge abutments), or 2) not less than 2 feet of noncontaminated, clean fill. The cover shall either provide a permeability of 10^{-5} cm/sec, or it shall be soil compacted to maximum 90% relative maximum compaction. Placement of a cover on the waste shall be completed with 30 days of revising/discharging the final load of wastes at the site. This requirement is consistent with previous siting criteria included in Resolution No. 95-63.

The discharge of FCS wastes beneath engineered structures/"hardscape" (*e.g.*, paved roadways, walkways, buildings, *etc*.) is another way of ensuring that the FCS wastes are adequately protected from the effects of storm water and the processes of erosion which could result in discharges of FCS wastes into surface waters.

g. **Property Owner Acknowledgment**: By signature on the attached FCS certification form written correspondence to the Regional Board, the property owner shall approve the placement of the FCS waste at the site. This requirement is consistent with previous criteria included in Resolution No. 95-63.

Written acknowledgement/approval of the receiving property owner is required through either a signature on the FCS Certification Form (Attachment 3 for Item 5) or via a separate written letter to the Regional Board.

6. CONCENTRATION LIMITS FOR FCS WASTE CONSTITUENTS

To establish a fuel constituent concentration limit methodology, Regional Board staff utilized the criteria for "inert waste" [CCR Title 27, §20230(a)] to develop a structured methodology for setting limits that focuses on soluble concentrations together with minimum site conditions and controls placed upon the disposal of the soil. These two dependent variables work together to compare the characteristics of the contaminated soil with the water to be protected.

The tentative Order requires that FCS wastes, acceptable for reuse as engineered fill, meet the criteria of either the primary level (a) **or** the secondary level (b) conditions listed below.

a. *Primary Level Conditions (First Tier):* The upper 80% confidence interval value of the mean concentrations resulting from the primary analyses of the samples shall not exceed the concentration limits for the primary constituents of concern listed in **Table 1**.

Table 1. Primary Concentration Limits for Fuel Constituents in FCS wastes

Type of Contaminant	Constituent of Concern	Carbon Range	Concentration Limit
Gasoline/Av-Gas	TPH-Gasoline	C_6-C_{12}	≤10 mg/kg
Diesel Fuel/ kerosene/ jet fuel/ bunker fuel	TPH-Diesel	C_{10}-C_{30}	≤100 mg/kg
ALL	Benzene		≤1 µg/kg
ALL	Toluene		≤150 µg/kg
ALL	Ethylbenzene		≤700 µg/kg
ALL	Xylenes		≤1,750 µg/kg
Gasoline	MTBE		≤ 13 µg/kg

KEY to TABLE 1:

Gas/Av-Gas = concentration limit required for FCS containing gasoline and aviation gasoline constituents

Gasoline = concentration limit required for FCS containing only gasoline constituents

Diesel Fuel/ kerosene/ jet fuel/ bunker fuel = concentration limit required for FCS containing the listed fuel constituents

ALL = analyses required for FCS containing any fuel constituent identified in this Order.

The primary concentration limits specified in Table 1 are characteristic of FCS wastes with low levels of petroleum fuel waste constituents. FCS wastes meeting those specified concentration limits, and managed in accordance with the Discharge Specifications for site conditions and controls, will pose a minimal threat to water quality.

If the primary level conditions are not met, the FCS waste samples exhibiting the highest concentrations as a result of the primary analyses (**a minimum of 4 samples for all parameters tested**) shall be further analyzed for the secondary constituents of concern (**Table 2**).

b. *Secondary Level Conditions (Second Tier):* The upper 80% confidence interval value of the mean concentrations resulting from the secondary analyses shall not exceed the concentration limits for the secondary constituents of concern listed in **Table 2.**

Table 2. Secondary (Leachable) Concentration Limits for Fuel Constituents in FCS Wastes

Type of Contaminant	Constituent of Concern	Carbon Range	Concentration Limit
Gas/Av-Gas	TPH-Gas	C_6-C_{12}	≤ 100 mg/kg
Diesel Fuel/ kerosene/ jet fuel/ bunker fuel	TPH- Diesel	C_{10}-C_{30}	≤ 500 mg/kg
Diesel Fuel/ kerosene/ jet fuel/ bunker fuel	TPH-Diesel	C_{10}-C_{30}	≤50 µg/L
ALL	Benzene		≤0.5 µg/L
ALL	Toluene		≤75 µg/L
ALL	Ethylbenzene		≤350 µg/L
ALL	Xylenes		≤900 µg/L
Gasoline	MTBE		≤ 7 µg/L

KEY to TABLE 2:

Gas/Av-Gas = concentration limit required for FCS containing gasoline and aviation gasoline constituents

Gasoline = concentration limit required for FCS containing only gasoline constituents

Diesel Fuel/ kerosene/ jet fuel/ bunker fuel = concentration limit required for FCS containing the listed fuel constituents

ALL = analyses required for FCS containing any fuel constituent identified in this Order.

Method for Calculation of Secondary Concentration Limits. The test specifications in Monitoring and Reporting Plan R9-2002-0342 require the use of standard U.S. EPA test protocols for testing waste leachability (Synthetic Precipitation Leaching Procedure – SPLP, EPA Method 1312). The SPLP test is designed to simulate subsurface conditions and the contact between water and the waste sample. The testing apparatus (zero headspace extractor) is designed to fully contain volatile waste constituents with no

headspace (air gap) and includes a dilution factor of 20 volumes of water to 1 volume of test soil. In order to assess the maximum amount of BTEX that could be present in the waste leachate, the value of the secondary limit account for this dilution factor.

The use of an environmental attenuation factor helps to account for the effects of soils upon the leachabilty of FCS waste constituents under conditions that may be representative of unclassified waste management units. In developing the secondary concentration limits for Resolution 95-63, generic attenuation factors were considered as follows:

Environmental Attenuation Factor (EAF)	Conditions Represented by EAF *
1 to 10	**Low protection** of ground water quality: High groundwater or permeable geological materials.
100	**Average protection** for ground water quality: significant depth to ground water (> 30 ft), soil containing appreciable and continuous clay or silty clay strata between the bottom of the wastes and the ground water.

"*****" = Description of generic attenuation factors and conditions represented by them are taken from Marshack (1986).

For purposes of Resolution No. 95-63, the upper end of the "low protection" scenario (EAF = 10) was selected to represent the protection of water quality offered by unclassified WMUs and to calculate secondary concentration limits. By way of example, the following equation was used to calculate the secondary concentration limit for benzene:

$$\textit{Secondary Benzene Limit} = \frac{\textit{Benzene MCL x Attenuation Factor}}{\textit{Dilution Factor}}$$

$$= \frac{1\ \mu g/L \times 10}{20} = \mathbf{0.5\ \mu g/L}$$

Table 3 lists the input data and resulting calculations for the Secondary Concentration Limits for FCS waste constituents included in Tentative Order R9-2002-0342 [**Discharge Specification C.3(b)**].

TABLE 3. Calculation of Secondary Concentration Limits from Method Used in Resolution No. 95-63.

FCS Constituents	Water Quality Objective [1] (in µg/L)	EAF [2]	Dilution Factor [3]	Calculated Secondary Concentration Limits (µg/L)
Diesel Fuel	100	10	20	50
Benzene	1	10	20	0.5
Toluene	150	10	20	75
Ethylbenzene	700	10	20	350
Total Xylenes	1,750	10	20	900
MTBE	13	10	20	7

"1" = from Basin Plan (1994), State Primary or Secondary MCLs for drinking water (from CCR Title 22)
"2" = from Marshack (1989)
"3" = dilution factor of 20 used for SPLP test (EPA Method 1312)

The secondary concentration limits (Table 2) were developed to establish leachable concentrations of waste constituents that would be protective of water quality for FCS wastes discharged/reused at unclassified WMUs. Discharges of FCS wastes that meet the concentration limits specified for waste leachate in Table 2 are deemed to be protective of water quality if those wastes are managed in accordance with the Discharge Specifications in tentative Order R9-2002-0342. The Regional Board staff concludes such FCS wastes would pose a minimal threat to water quality. These criteria are also consistent with previous FCS waste constituent concentration limits previously included in Resolution No. 95-63.

7. MANAGEMENT REQUIREMENTS FOR DISCHARGES OF FCS WASTES TO TEMPORARY WASTE PILES

At many redevelopment sites, it is a common practice to deliver materials to areas designated for storage or "stockpiles" until such time as those materials are needed in the project. In the case of FCS wastes, this could entail the creation of temporary waste piles (stockpiles) of selected fill material. If not properly managed and maintained discharges of FCS wastes into temporary waste piles may create a source of pollution from erosion and transport of waste constituents via storm water discharges into surface water resources. For this reason, tentative Order R9-2002-0342 also contains waste discharge requirements for management of temporary waste piles.

Any discharger who creates temporary waste piles containing FCS wastes, prior to the final discharge, for reuse or disposal of FCS wastes, shall comply with the following requirements:

a. **Site Conditions**: All parcels of land/property receiving a temporary discharges of FCS wastes (*i.e.,* temporary waste piles) under this tentative Order, shall meet the following minimum general site conditions:

    i. Runon/Runoff Protection: Surface drainage shall be diverted from the temporary waste piles. For all waste piles, the dischargers shall implement effective Best Management Practices (BMPs) to prevent surface water run-on and runoff from contacting wastes and to prevent erosion and transport of wastes by surface runoff.

    ii. Groundwater Protection: All waste piles shall be placed at least five feet above the highest anticipated level of groundwater.

    iii. Surface Water Protection: All waste piles established under this waiver shall be located not less than 100 feet from any surface water identified in the Basin Plan.

    iv. Flood Plain Protection: All waste piles shall be protected against 100-year peak stream flows as defined by the County flood control agency.

b. **Inspection and Maintenance:** Dischargers shall regularly inspect and maintain wastes discharged to temporary waste piles established under this Order. Inspections shall be conducted at a frequency that will ensure the discharge of FCS wastes does not create conditions of pollution or nuisance. The discharger shall report on the disposition of all temporary waste piles at the time of the final inspection.

The Discharge Specifications for management of temporary waste piles were taken from the policy for conditional waiver of WDRs for temporary waste piles approved by this Regional Board as: Resolution R9-2002-0186, "A Review of the Waste Discharge Requirement Waiver Policy and Types of Discharges Identified for Inclusion in this Policy." Dischargers who do not create temporary wastes piles of FCS wastes would not have to comply with the Discharge Specifications for temporary waste piles in tentative Order R9-2002-0342.

8. EROSION CONTROLS AND STORMWATER PROTECTION

Implementation of adequate best management practices (BMPs) for effective storm water conveyance and erosion control are essential for the protection of surface water resources

and the restoration of impaired water bodies located within the San Diego Region. Discharges of FCS wastes for reuse/disposal at sites other than classified waste management units must control erosion and prevent storm water discharges of FCS wastes from the site. Erosion controls and storm water protection will be conducted through the implementation of best management practices (BMPs) for effective control of erosion and storm water discharges including FCS wastes. Sites receiving discharges of FCS wastes for reuse and or disposal, under this tentative Order, shall comply with the storm water and erosion control requirements of Order 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, "Waste Discharge Requirements for Discharges of Storm Water Associated Construction Activity."

9. ENROLLMENT PROCEDURE

The enrollment procedure is consistent with the application process for WDRs. The enrollment procedure includes submittal of an application, the RWD and supporting information, and a filing fee. In order to be effective, the enrollment process should also simple and easy to execute. The Regional Board staff developed the FCS Certification form (Attachment 3 to Item 5) as a concise presentation of the necessary supporting information for the RWD. The FCS Certification Form will assist the Regional Board staff in more efficiently evaluating and processing applications for coverage under tentative Order R9-2002-0342.

In order to enroll for coverage under tentative Order R9-2002-0342, the discharger must submit a Report of Waste Discharge (RWD) including the following minimum information:

a. Application/Report of Waste Discharge general information form (Form 200) filled out in accordance with the instructions and a filing fee of $1,000 payable to the State Water Resources Control Board.

   The enrollment fee is based upon the assigned threat to water quality (TTWQ) and complexity rating (CPLX) established pursuant to criteria in CCR Title 23, §2200. The Regional Board staff has assigned a TTWQ/CPLX rating of "III-C" for discharges covered under tentative Order R9-2002-0342. This rating is appropriate for discharges of waste requiring implementation of best management practices and where ground water monitoring is not required. Under the fee schedule in CCR Title 23, §2200, a TTWQ/CPLX rating of III-C requires the discharger submit a filing fee of $1,000 payable to the State Water Resources Control Board (SWRCB).

b. Completed FCS certification form (see Attachment 3 for Item 5).

c. Copies of all analytical results, associated laboratory data sheets, including QA/QC data and chain of custody documents.

d. A discussion of the discharge site and petroleum hydrocarbon FCS (waste) characteristics including:

   i. Identification of the period during which waste is to be disposed of at the site;
   ii. Description of disposal methods, operation and maintenance activities;

   ii. Description of types and quantities of wastes to be disposed of;

   iv. Present and future land use.

e. The discharger shall file a notice of intent (NOI) and application fee, as applicable, for coverage under State Water Resources Control Board ("SWRCB") Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, "Waste Discharge Requirements for Discharges of Storm Water Associated Construction Activity."

f. Documentation of how the discharger will comply with all applicable requirements of this Order and Monitoring and Reporting Program R9-2002-0342.

g. A topographic map at an appropriate scale and other information clearly illustrating the location, owners, and uses of all wells located within one mile of the site.

h. Any other information pertinent to the protection of water quality or public health and prevention of nuisance.

The discharger is required to submit a separate completed FCS certification form for each source of FCS wastes reused/discharged at the site. A separate RWD, Form 200 and associated filing fee, is only required if more than one site is to receive the proposed discharge of FCS wastes for reuse/disposal.

After receipt and review of a complete application package, the Regional Board Executive Officer may send a letter informing the discharger of the status of their application for enrollment in tentative Order R9-2002-0342. The letter will indicate either: a.) the application is deemed acceptable and the discharger is enrolled in tentative

Order R9-2002-0342, or b.) the application is deemed to be unacceptable and that the discharger should apply for individual WDRs for the proposed reuse/discharge of wastes or make arrangements to dispose of the FCS wastes at a classified waste management unit.

If the application is deem acceptable, the discharger will be enrolled in tentative Order R9-2002-0342. The Regional Board Executive Officer will provide a summary of activity, *i.e.*, new enrollees and terminated enrollees, for tentative Order R9-2002-0342 in the Executive Officer Reports included in the monthly agenda packets provided to the Regional Board. The Regional Board staff will use the WIN (formerly SWIM) database will track the status of all enrollees in tentative Order R9-2002-0342.

10. REPORTING REQUIREMENTS

The discharger is required to comply with the following minimum reporting requirements:

a. Submit to the Regional Board a completed FCS certification report (Attachment 3 to Item 5) at least **30 days** prior to reuse or disposal of FCS wastes at a site, other than a Classified waste management unit. Comments received in response to the public notification are to be forwarded to the Regional Board with the certification report.

b. Pursuant to Section 13260(a) of the California Water Code, prior to disposal, submit a Report of Waste Discharge (RWD) for site-specific waste discharge requirements if the discharge is unable to meet the primary **or** secondary level conditions listed in **Discharge Specification C.3.a and C.3.b** of tentative Order R9-2002-0342.

c. Other Constituents: The discharger shall report leachable concentrations of any other waste constituents, not listed in **Discharge Specification C.3.b.** (Table 2), that may be present in concentrations that could pose a threat to water quality at the proposed disposal site.

d. Furnish to the Regional Board, within a reasonable time, any information which the Regional Board Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The discharger shall also furnish to the Regional Board upon request, copies of all records required to be kept under this Order.

The discharger shall notify the Regional Board, in writing, **at least 30 days** in advance of any proposed transfer of ownership or responsibility for maintenance of a site/facility

subject to this Order. The discharger shall include with such notification, written acknowledgement by the prospective purchaser or successor in responsibility executed under penalty of perjury under the laws of the state of California, that such purchaser or successor has read and understood the requirements contained herein and will accept responsibility for compliance therewith as of the date of transfer of ownership or responsibility.

Tentative Order R9-2002-0342 requires the discharger to submit a final technical report showing the final disposition of the FCS wastes within the reuse/disposal area. The discharger is required to submit the report **within 60-days** of completing the proposed discharge of FCS waste at the site. The Regional Board staff will use the final report as a point of reference and perform a site inspection to verify that conditions of tentative Order R9-2002-0342 have been met. If the Regional Board staff determine that existing site conditions preclude any additional threats to water quality from the discharge of FCS wastes, then enrollment of that site in tentative Order R9-2002-0342 may be terminated. If existing site conditions are not adequate to preclude the threat of impacts to water quality, then coverage of that site under tentative Order R9-2002-0342 shall continue while the Regional Board staff work with the discharger to resolve outstanding concerns at the site. For sites enrolled for more than one year, the discharger shall pay an annual WDR fee, invoiced by the SWRCB, for the TTWQ/CPLX rating of "III-C."

At any point in time, failure to comply with the requirements of tentative Order R9-2002-0342 will result in the Regional Board staff developing enforcement actions against the discharger in accordance with the SWRCB's Enforcement Policy (2002).

11. COMPLIANCE WITH CEQA

Tentative order R9-2002-342 relies upon the CEQA documents certified by the Regional Board on November 15, 1993. The Regional Board adopted (Resolution No. 93-103) a Negative Declaration on November 15, 1993, for three types of discharges, including the disposal and reuse of petroleum hydrocarbon fuel contaminated soils, in accordance with the California Environmental Quality Act (Public Resources Code, Section 21000, *et seq*.) and State guidelines. The Negative Declaration was adopted in support of Addenda Nos. 1, 2, and 3 to Resolution No. 83-21. The Regional Board determined that there would be no significant adverse water quality impacts in accordance wit the provisions of the California Environmental Quality Act.

Tentative Order No. R9-2002-0342 contains General Waste Discharge Requirements (WDRs) to regulate the reuse of Fuel Contaminated Soil (FCS) wastes that may affect water quality in the San Diego Region. The WDRs in Order No. R9-2002-0342 includes both minimum requirements for the disposal site (*i.e.*, land use restrictions, setbacks of the disposal site from surface water and groundwater, *etc*.) and specific concentration

limits of petroleum hydrocarbon waste constituents the soil/waste that may be discharged/re-used at the disposal site.

The Regional Board adopted Resolution No. 83-21 and Addendum 1, 2, and 3 (collectively referred to as Resolution No. 83-21), that conditionally waived adoption of WDRs for the disposal/reuse of specified soils. The waiver presented in Addendum No. 2 applied to the disposal or reuse of soils containing low concentrations of pollutants for disposal/reuse.

The Regional Board adopted Resolution No. 93-103, certifying a negative declaration for addenda Nos. 1, 2, and 3 to Resolution No. 83-21. Resolution No. 93-103, which was supported by an initial study/staff report issued on September 10, 1993, concluded that the project would have no significant environmental impacts.

Both Addendum No. 2 to Resolution 83-21 and tentative Order R9-2002-0342 are functionally equivalent because they both contain restrictions on how the soil may be reused, and the petroleum hydrocarbon concentrations for the waste to quality under either the waiver, or the general WDRs. However, tentative Order No. R9-2002-0342 is more stringent because it:

a.) establishes General WDRs for re-use/disposal of FCS wastes,

b.) limits disposal sites to industrial or commercial facilities,

c.) requires concentration limits for leachable pollutants (secondary concentration limits – **Discharge Specification C.3(b)** - Table 2) that include MTBE and are more restrictive (lower leachable concentrations) than those listed for petroleum fuel constituents in Addendum No. 2 to Resolution No. 83-21,

d.) requires that discharges of FCS wastes be covered by either 1) engineered materials (*e.g.* used as road base, fill beneath buildings, bridge abutments), or 2) not less than 2 feet of noncontaminated, clean fill, and

e.) requires implementation of storm water and erosion control BMPs for control of erosion and discharge of FCS waste constituents. The tentative Order requires dischargers to comply with requirements of SWRCB Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, "Waste Discharge Requirements for Discharges of Storm Water Associated Construction Activity."

As a result, discharges regulated pursuant to tentative Order R9-2002-0342 will represent a lower potential threat to water quality than what was previously allowed under Resolution No. 83-21.

Resolution No. 83-21 and Order No. R9-2002-0342 are functionally equivalent projects, and that there will be no significant adverse water quality impacts due to the project. Therefore, the negative declaration adopted by Resolution 93-103 is applicable to tentative Order R9-2002-0342.

12. STAFF RECOMMENDATION

The Regional Board staff recommends adoption of tentative Order No. R9-2002-0342 and tentative Monitoring and Reporting Program R9-2002-0342.

REFERENCES CITED

Marshack, J.B., 1989, "Designated Level Methodology for Waste Classification and Cleanup Level Determination", California Regional Water Quality Control Board – Central Valley Region (R5), updated from 1986. Available on the web at: **http://www.swrcb.ca.gov/rwqcb5/available_documents/dlm.pdf**